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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,593	02/18/2004	Eric T. Martin	200208787-1	6308
22879 7590 04/13/2009 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400				
EXAMINER				
THOMAS, BRANDIN				
ART UNIT		PAPER NUMBER		
2873				
NOTIFICATION DATE		DELIVERY MODE		
04/13/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/782,593

Applicant(s)

MARTIN ET AL.

Examiner

BRANDI N. THOMAS

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-19 and 34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-19 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/18/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 13 recites the limitation "one of the plurality of electro-mechanical devices" in lines 7 and 8; claim 15 recites the limitation "one of a plurality of MEMS devices in lines 4 and 6. There is insufficient antecedent basis for this limitation in the claim.
3. Claim 34 disclose the claimed elements "means for selectively setting a reference current onto a controlled current output that is variable voltage compliant, the controlled current output coupled to the MEMs device on the basis of the time modulated control signal; means for time modulating a control signal to represent a desired gap between the fixed plate and the electrostatically movable plate by a charge which is a function of the controlled current output and the modulated time; and means for displacing the electrostatically movable plate in response to the controlled current output" is a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to disclose the corresponding structure, material, or acts for the claimed function.

Applicant is required to:

- (a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or
- (b) Amend the written description of the specification such that it expressly recites what structure, material, or acts perform the claimed function without introducing any new matter (35 U.S.C. 132(a)).

If applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant is required to clarify the record by either:

(a) Amending the written description of the specification such that it expressly recites the corresponding structure, material, or acts for performing the claimed function and clearly links or associates the structure, material, or acts to the claimed function, without introducing any new matter (35 U.S.C. 132(a)); or

(b) Stating on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 13-19 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Eden et al. (6662029 B2).

Regarding claim 13, Eden et al. discloses a method of controlling a gap (50) between at least one fixed plate (10 and 15) and an electrostatically movable plate (30) in a MEMs device (col. 6, lines 63-67), comprising: time modulating a control signal (tuning signal) to a controlled

current output that is variable voltage (V_t) compliant to represent a desired gap (50) between the fixed plate (10 and 15) and the electrostatically movable plate (30) (col. 10, lines 17-28); selectively routing a charge which is a function of the controlled current output and the modulated time to array elements each including control circuitry and one of the plurality of electro-mechanical devices (col. 9, lines 65-67 and col. 10, lines 1-2 and 17-22); and displacing the electrostatically movable plate (30) in response to the controlled current output (col. 10, lines 26-28).

Regarding claim 14, Eden et al. discloses a method of controlling a gap (50) between at least one fixed plate (10 and 15) and an electrostatically movable plate (30) in a MEMs device (col. 6, lines 63-67), wherein selectively routing a charge comprises selectively mirroring a reference current onto the controlled current output coupled to the MEMs device on the basis of the time modulated control signal (tuning signal) (col. 9, lines 60-65 and col. 10, lines 1-4).

Regarding claim 15, Eden et al. discloses a method of controlling a gap (50) between at least one fixed plate (10 and 15) and an electrostatically movable plate (30) in a MEMs device (col. 6, lines 63-67), wherein selectively mirroring the reference current selectively mirrors the reference current onto a controlled current outputs, each of the plurality of controlled current outputs being coupled to one of a plurality of MEMs devices, and wherein displacing the electrostatically movable plate (30) displaces an electrostatically movable plate (30) in each of the plurality of MEMs devices in response to a corresponding controlled current output (col. 10, lines 17-22 and 26-28).

Regarding claim 16, Eden et al. discloses a method of controlling a gap (50) between at least one fixed plate (10 and 15) and an electrostatically movable plate (30) in a MEMs device (col. 6, lines 63-67), further comprising: generating the reference current (col. 9, lines 60-65).

Regarding claim 17, Eden et al. discloses a method of controlling a gap (50) between at least one fixed plate (10 and 15) and an electrostatically movable plate (30) in a MEMs device (col. 6, lines 63-67), further comprising: adjusting the reference current to represent the desired gap (50) between the fixed plate (10 and 15) and the electrostatically movable plate (30) (col. 10, lines 17-28).

Regarding claim 18, Eden et al. discloses a method of controlling a gap (50) between at least one fixed plate (10 and 15) and an electrostatically movable plate (30) in a MEMs device (col. 6, lines 63-67), wherein selectively mirroring the reference current onto the controlled current output generates the variable voltage (V_t) compliant controlled current output (col. 10, lines 17-22 and 26-28).

Regarding claim 19, Eden et al. discloses a method of controlling a gap (50) between at least one fixed plate (10 and 15) and an electrostatically movable plate (30) in a MEMs device (col. 6, lines 63-67).

Regarding claim 34, Eden et al. discloses an apparatus for controlling a gap (50) between at least one fixed plate (10 and 15) and an electrostatically movable plate (30) in a MEMs device (col. 6, lines 63-67), comprising: means for selectively setting a reference current onto a controlled current output that is variable voltage compliant, the controlled current output coupled to the MEMs device on the basis of the time modulated control signal (col. 9, lines 60-65 and col. 10, lines 1-4); means for time modulating a control signal to represent a desired gap (50)

between the fixed plate (10 and 15) and the electrostatically movable plate (30) by a charge which is a function of the controlled current output and the modulated time (col. 10, lines 17-22); and means for displacing the electrostatically movable plate in response to the controlled current output (col. 10, lines 26-28).

Response to Arguments

6. Applicant's arguments with respect to claims 13-19 and 34 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRANDI N. THOMAS whose telephone number is (571)272-2341. The examiner can normally be reached on Monday - Thursday from 6-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brandi N Thomas/
Examiner
Art Unit 2873

BNT
April 2, 2009

/Ricky L. Mack/
Supervisory Patent Examiner, Art Unit 2873